

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1639MLS

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 JUL 12 BEILSTEIN enhanced with new display and select options,
resulting in a closer connection to BABS
NEWS 4 AUG 02 IFIPAT/IFIUDB/IFICDB reloaded with new search and display
fields
NEWS 5 AUG 02 CAPLUS and CA patent records enhanced with European and Japan
Patent Office Classifications
NEWS 6 AUG 02 The Analysis Edition of STN Express with Discover!
(Version 7.01 for Windows) now available
NEWS 7 AUG 27 BIOCOMMERCE: Changes and enhancements to content coverage
NEWS 8 AUG 27 BIOTECHABS/BIOTECHDS: Two new display fields added for legal
status data from INPADOC
NEWS 9 SEP 01 INPADOC: New family current-awareness alert (SDI) available
NEWS 10 SEP 01 New pricing for the Save Answers for SciFinder Wizard within
STN Express with Discover!
NEWS 11 SEP 01 New display format, HITSTR, available in WPIDS/WPINDEX/WPIX
NEWS 12 SEP 27 STANDARDS will no longer be available on STN
NEWS 13 SEP 27 SWETSCAN will no longer be available on STN
NEWS 14 OCT 28 KOREAPAT now available on STN

NEWS EXPRESS OCTOBER 29 CURRENT WINDOWS VERSION IS V7.01A, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004
NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
specific topic.

All use of STN is subject to the provisions of the STN Customer
agreement. Please note that this agreement limits use to scientific
research. Use for software development or design or implementation
of commercial gateways or other similar uses is prohibited and may
result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 18:17:10 ON 17 NOV 2004

=> file medline biosis embase
COST IN U.S. DOLLARS

SINCE FILE TOTAL
ENTRY SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'MEDLINE' ENTERED AT 18:17:26 ON 17 NOV 2004

FILE 'BIOSIS' ENTERED AT 18:17:26 ON 17 NOV 2004
Copyright (c) 2004 The Thomson Corporation.

FILE 'EMBASE' ENTERED AT 18:17:26 ON 17 NOV 2004
COPYRIGHT (C) 2004 Elsevier Inc. All rights reserved.

=> d his

(FILE 'HOME' ENTERED AT 18:17:10 ON 17 NOV 2004)

FILE 'MEDLINE, BIOSIS, EMBASE' ENTERED AT 18:17:26 ON 17 NOV 2004

=> logoff

ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF
LOGOFF? (Y)/N/HOLD:n

=> d his

(FILE 'HOME' ENTERED AT 18:17:10 ON 17 NOV 2004)

FILE 'MEDLINE, BIOSIS, EMBASE' ENTERED AT 18:17:26 ON 17 NOV 2004

=> e gascoyne p/au

E1	2	GASCOYNE MEL/AU
E2	12	GASCOYNE N/AU
E3	6 -->	GASCOYNE P/AU
E4	32	GASCOYNE P R/AU
E5	65	GASCOYNE P R C/AU
E6	4	GASCOYNE PETER/AU
E7	22	GASCOYNE PETER R C/AU
E8	53	GASCOYNE R/AU
E9	3	GASCOYNE R A/AU
E10	281	GASCOYNE R D/AU
E11	1	GASCOYNE RANDALL D/AU
E12	17	GASCOYNE RANDY/AU

=> s e3-e7

L1 129 ("GASCOYNE P"/AU OR "GASCOYNE P R"/AU OR "GASCOYNE P R C"/AU OR
"GASCOYNE PETER"/AU OR "GASCOYNE PETER R C"/AU)

=> s l1 and manueverable

L2 0 L1 AND MANUEVERABLE

=> l1 and dielectrophoresis

L3 39 L1 AND DIELECTROPHORESIS

=> dup rem l3

PROCESSING COMPLETED FOR L3

L4 18 DUP REM L3 (21 DUPLICATES REMOVED)

=> t ti l4 1-18

L4 ANSWER 1 OF 18 MEDLINE on STN DUPLICATE 1
TI **Dielectrophoresis**-based programmable fluidic processors.

L4 ANSWER 2 OF 18 MEDLINE on STN DUPLICATE 2
TI Droplet-based chemistry on a programmable micro-chip.

L4 ANSWER 3 OF 18 MEDLINE on STN DUPLICATE 3
 TI Particle separation by **dielectrophoresis**.

L4 ANSWER 4 OF 18 MEDLINE on STN DUPLICATE 4
 TI Detection of cellular responses to toxicants by **dielectrophoresis**.

L4 ANSWER 5 OF 18 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
 TI Membrane dielectric changes indicate induced apoptosis in HL-60 cells more sensitively than surface phosphatidylserine expression or DNA fragmentation.

L4 ANSWER 6 OF 18 MEDLINE on STN DUPLICATE 5
 TI Microsample preparation by **dielectrophoresis**: isolation of malaria.

L4 ANSWER 7 OF 18 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
 TI Development and optimization of a dielectrophoretic cell separator.

L4 ANSWER 8 OF 18 MEDLINE on STN DUPLICATE 6
 TI Dielectrophoretic manipulation of cells with spiral electrodes.

L4 ANSWER 9 OF 18 MEDLINE on STN DUPLICATE 7
 TI Introducing **dielectrophoresis** as a new force field for field-flow fractionation.

L4 ANSWER 10 OF 18 MEDLINE on STN DUPLICATE 8
 TI Electroration of liposomes: verification of dielectric multi-shell model for cells.

L4 ANSWER 11 OF 18 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
 TI Changes in membrane electrical properties of human T-lymphocytes induced by mitogenic stimulation.

L4 ANSWER 12 OF 18 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
 TI Cell separation by conventional **dielectrophoresis** combined with field-flow-fractionation.

L4 ANSWER 13 OF 18 MEDLINE on STN DUPLICATE 9
 TI Membrane changes associated with the temperature-sensitive P85gag-mos-dependent transformation of rat kidney cells as determined by **dielectrophoresis** and electroration.

L4 ANSWER 14 OF 18 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
 TI Theory of generalized **dielectrophoresis** and its applications.

L4 ANSWER 15 OF 18 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
 TI Non-uniform spatial distributions of both the magnitude and phase of AC electric fields determine dielectrophoretic forces.

L4 ANSWER 16 OF 18 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
 TI Characterization and manipulation of cells by electroration and **dielectrophoresis**.

L4 ANSWER 17 OF 18 MEDLINE on STN DUPLICATE 10

TI Membrane changes accompanying the induced differentiation of Friend murine erythroleukemia cells studied by **dielectrophoresis**.

L4 ANSWER 18 OF 18 MEDLINE on STN DUPLICATE 11

TI Dielectrophoretic characterisation of Friend murine erythroleukaemic cells as a measure of induced differentiation.

=> d ibib abs 14 7,9,12,14-16

L4 ANSWER 7 OF 18 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

ACCESSION NUMBER: 1999:399162 BIOSIS

DOCUMENT NUMBER: PREV199900399162

TITLE: Development and optimization of a dielectrophoretic cell separator.

AUTHOR(S): Yang, J.; Huang, Y.; Becker, F. F.; **Gascoyne, P. R.**
; Wang, X. B.

CORPORATE SOURCE: Taipei, Taiwan

SOURCE: Clinical Chemistry, (June, 1999) Vol. 45, No. 6 PART 2, pp. A104. print.

Meeting Info.: 51st Annual Meeting of the American Association of Clinical Chemistry. New Orleans, Louisiana, USA. July 25-29, 1999. American Association of Clinical Chemistry.

CODEN: CLCHAU. ISSN: 0009-9147.

DOCUMENT TYPE: Conference; (Meeting)

Conference; Abstract; (Meeting Abstract)

Conference; (Meeting Poster)

LANGUAGE: English

ENTRY DATE: Entered STN: 8 Oct 1999

Last Updated on STN: 8 Oct 1999

L4 ANSWER 9 OF 18 MEDLINE on STN DUPLICATE 7

ACCESSION NUMBER: 97395724 MEDLINE

DOCUMENT NUMBER: PubMed ID: 9251828

TITLE: Introducing **dielectrophoresis** as a new force field for field-flow fractionation.

AUTHOR: Huang Y; Wang X B; Becker F F; **Gascoyne P R**

CORPORATE SOURCE: Department of Experiment Pathology, University of Texas M. D. Anderson Cancer Center, Houston 77030, USA.

CONTRACT NUMBER: R01 DK51065-01 (NIDDK)

SOURCE: Biophysical journal, (1997 Aug) 73 (2) 1118-29.

Journal code: 0370626. ISSN: 0006-3495.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 199709

ENTRY DATE: Entered STN: 19971013

Last Updated on STN: 19971013

Entered Medline: 19970929

AB We present the principle of cell characterization and separation by dielectrophoretic field-flow fractionation and show preliminary experimental results. The operational device takes the form of a thin chamber in which the bottom wall supports an array of microelectrodes. By applying appropriate AC voltage signals to these electrodes, dielectrophoretic forces are generated to levitate cells suspended in the chamber and to affect their equilibrium heights. A laminar flow profile is established in the chamber so that fluid flows faster with increasing distance from the chamber walls. A cell carried in the flow stream will attain an equilibrium height, and a corresponding velocity, based on the

balance of dielectrophoretic, gravitational, and hydrodynamic lift forces it experiences. We describe a theoretical model for this system and show that the cell velocity is a function of the mean fluid velocity, the voltage and frequency of the signals applied to the electrodes, and, most significantly, the cell dielectric properties. The validity of the model is demonstrated with human leukemia (HL-60) cells subjected to a parallel electrode array, and application of the device to separating HL-60 cells from peripheral blood mononuclear cells is shown.

L4 ANSWER 12 OF 18 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

ACCESSION NUMBER: 1996:141770 BIOSIS
DOCUMENT NUMBER: PREV199698713905
TITLE: Cell separation by conventional **dielectrophoresis** combined with field-flow-fractionation.
AUTHOR(S): **Gascoyne, P. R. C.**; Huang, Y.; Wang, X.-J.; Yang, J.; Degasperis, G.; Wang, Xiaobo
CORPORATE SOURCE: Dep. Molecular Pathol., Box 89, Univ. Tex. M.D. Anderson Cancer Cent., 1515 Holcombe Boulevard, Houston, TX 77030, USA
SOURCE: Biophysical Journal, (1996) Vol. 70, No. 2 PART 2, pp. A333.
Meeting Info.: 40th Annual Meeting of the Biophysical Society. Baltimore, Maryland, USA. February 17-21, 1996. CODEN: BIOJAU. ISSN: 0006-3495.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 3 Apr 1996
Last Updated on STN: 26 Apr 1996

L4 ANSWER 14 OF 18 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

ACCESSION NUMBER: 1995:138705 BIOSIS
DOCUMENT NUMBER: PREV199598153005
TITLE: Theory of generalized **dielectrophoresis** and its applications.
AUTHOR(S): Wang, X.-B.; Huang, Y.; Becker, F. F; **Gascoyne, P. R. C.**
CORPORATE SOURCE: Box 89, UT M.D. Anderson Cancer Center, 1515 Holcombe Blvd., Houston, TX 77030, USA
SOURCE: Biophysical Journal, (1995) Vol. 68, No. 2 PART 2, pp. A221.
Meeting Info.: 39th Annual Meeting of the Biophysical Society. San Francisco, California, USA. February 12-16, 1995. CODEN: BIOJAU. ISSN: 0006-3495.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 3 Apr 1995
Last Updated on STN: 3 Apr 1995

L4 ANSWER 15 OF 18 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

ACCESSION NUMBER: 1995:201916 BIOSIS
DOCUMENT NUMBER: PREV199598216216
TITLE: Non-uniform spatial distributions of both the magnitude and phase of AC electric fields determine dielectrophoretic forces.
AUTHOR(S): Wang, X.-B. [Reprint author]; Hughes, M. P.; Huang, Y.; Becker, F. F.; **Gascoyne, P. R. C.**

CORPORATE SOURCE: Box 89, Dep. Mol. Pathol., Univ. Texas M.D. Anderson Cancer
Cent., 1515 Holcombe Blvd., Houston, TX 77030, USA
SOURCE: Biochimica et Biophysica Acta, (1995) Vol. 1243, No. 2, pp.
185-194.
CODEN: BBACAQ. ISSN: 0006-3002.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 23 May 1995
Last Updated on STN: 23 May 1995

AB It is well known that the conventional dielectrophoretic force acting on a
polarized particle in a non-uniform AC electric field is proportional to
the in-phase component of the induced dipole moment and the non-uniformity
of the field strength. In contrast, the travelling-wave-dielectrophoretic
force that acts on a particle subjected to a travelling electric field is
proportional to the out-of-phase component of the induced dipole moment.
We derive a theory that unifies the description and interpretation of
conventional dielectrophoretic and travelling-wave-dielectrophoretic
forces. We show that a particle in a nonuniform AC electric field
experiences a dielectrophoretic force due to spatial non-uniformities of
the magnitude and the phase of the field interacting, respectively, with
the in-phase and out-of-phase components of the induced dipole moment.
The theory is used to explain the translational effects observed for
particles in the presence of standing, travelling and rotating fields in
several experimental electrode configurations. The good agreement found
between the experimental observations and the theoretical predictions
validate the theory.

L4 ANSWER 16 OF 18 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN

ACCESSION NUMBER: 1994:287875 BIOSIS
DOCUMENT NUMBER: PREV199497300875
TITLE: Characterization and manipulation of cells by
electrorotation and **dielectrophoresis**.
AUTHOR(S): **Gascoyne, P. R. C.**; Wang, X.-B.; Huang, Y. J.;
Becker, F. F.
CORPORATE SOURCE: Univ. Tex. M. D. Anderson Cancer Cent., 1515 Holcombe
Blvd., Houston, TX 77030, USA
SOURCE: Proceedings of the American Association for Cancer Research
Annual Meeting, (1994) Vol. 35, No. 0, pp. 16.
Meeting Info.: 85th Annual Meeting of the American
Association for Cancer Research. San Francisco, California,
USA. April 10-13, 1994.
ISSN: 0197-016X.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 30 Jun 1994
Last Updated on STN: 30 Jun 1994

=> FIL STNGUIDE

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
15.25	15.46

FULL ESTIMATED COST

FILE 'STNGUIDE' ENTERED AT 18:22:37 ON 17 NOV 2004
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY, JAPAN SCIENCE
AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Nov 12, 2004 (20041112/UP).

=> s l11 and vesicle
L12 2 L11 AND VESICLE

=> s l11 and ghost
L13 1 L11 AND GHOST

=> s l12 and ghost
L14 1 L12 AND GHOST

=> t ti l14

L14 ANSWER 1 OF 1 WPIDS COPYRIGHT 2004 THE THOMSON CORP on STN
TI Engineered microparticle, e.g. for blood analysis, is dielectrically-
dispersive and produces dielectric response to applied electric field.

=> l11 not l 14
L15 3 L11 NOT L 14

=> l11 not 14
L16 3 L11 NOT 14

=> l11 not l14
L17 2 L11 NOT L14

=> t ti l17 1-2

L17 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN
TI Forming and modifying dielectrically-engineered microparticles

L17 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN
TI Dielectrically Addressable Microspheres Engineered Using Self-Assembled
Monolayers

=> file medline biosis embase
COST IN U.S. DOLLARS

	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	20.03	93.22

	SINCE FILE	TOTAL
	ENTRY	SESSION
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)		
CA SUBSCRIBER PRICE	0.00	-1.40

FILE 'MEDLINE' ENTERED AT 17:56:58 ON 17 NOV 2004

FILE 'BIOSIS' ENTERED AT 17:56:58 ON 17 NOV 2004
Copyright (c) 2004 The Thomson Corporation.

FILE 'EMBASE' ENTERED AT 17:56:58 ON 17 NOV 2004
COPYRIGHT (C) 2004 Elsevier Inc. All rights reserved.

=> e gascoyne p/au
E1 2 GASCOYNE MEL/AU
E2 12 GASCOYNE N/AU
E3 6 --> GASCOYNE P/AU
E4 32 GASCOYNE P R/AU
E5 65 GASCOYNE P R C/AU
E6 4 GASCOYNE PETER/AU
E7 22 GASCOYNE PETER R C/AU

E8	53	GASCOYNE R/AU
E9	3	GASCOYNE R A/AU
E10	281	GASCOYNE R D/AU
E11	1	GASCOYNE RANDALL D/AU
E12	17	GASCOYNE RANDY/AU

=> s e3-37

'E37' NOT FOUND

The E# entered is not currently defined.

=> s e3-e7

L18 129 ("GASCOYNE P"/AU OR "GASCOYNE P R"/AU OR "GASCOYNE P R C"/AU OR
"GASCOYNE PETER"/AU OR "GASCOYNE PETER R C"/AU)

=> l18 and (particle or microparticle)

L19 15 L18 AND (PARTICLE OR MICROPARTICLE)

=> s l18 and ganglioside

L20 0 L18 AND GANGLIOSIDE

=> l18 and erythrocyte

L21 9 L18 AND ERYTHROCYTE

=> dup rem l21

PROCESSING COMPLETED FOR L21

L22 5 DUP REM L21 (4 DUPLICATES REMOVED)

=> t ti l22 1-5

L22 ANSWER 1 OF 5 MEDLINE on STN DUPLICATE 1
TI Dielectric properties of human leukocyte subpopulations determined by
electrorotation as a cell separation criterion.

L22 ANSWER 2 OF 5 MEDLINE on STN DUPLICATE 2
TI Dielectrophoretic detection of changes in **erythrocyte** membranes
following malarial infection.

L22 ANSWER 3 OF 5 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
TI Separation of human breast cancer cells from blood by differential
dielectric affinity.

L22 ANSWER 4 OF 5 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI Cell dielectric phenotype determined from electrokinetic studies.

L22 ANSWER 5 OF 5 MEDLINE on STN
TI Changes in Friend murine erythroleukaemia cell membranes during induced
differentiation determined by electrorotation.

=> dup rem l19

PROCESSING COMPLETED FOR L19

L23 8 DUP REM L19 (7 DUPLICATES REMOVED)

=> t ti l23 1-8

L23 ANSWER 1 OF 8 MEDLINE on STN
TI Dielectrophoresis-based programmable fluidic processors.

L23 ANSWER 2 OF 8 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
TI Droplet-based chemistry on a programmable micro-chip.

L23 ANSWER 3 OF 8 MEDLINE on STN DUPLICATE 1
 TI **Particle** separation by dielectrophoresis.

L23 ANSWER 4 OF 8 MEDLINE on STN DUPLICATE 2
 TI Separation of polystyrene microbeads using dielectrophoretic/gravitational field-flow-fractionation.

L23 ANSWER 5 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
 TI On the low frequency dielectric properties of charged particles.

L23 ANSWER 6 OF 8 MEDLINE on STN DUPLICATE 3
 TI Separation of human breast cancer cells from blood by differential dielectric affinity.

L23 ANSWER 7 OF 8 MEDLINE on STN DUPLICATE 4
 TI Non-uniform spatial distributions of both the magnitude and phase of AC electric fields determine dielectrophoretic forces.

L23 ANSWER 8 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
 TI Numerical analysis of the influence of experimental conditions on the accuracy of dielectric parameters derived from electrorotation measurements.

=> d ibib abs 123 4,5

L23 ANSWER 4 OF 8 MEDLINE on STN DUPLICATE 2
 ACCESSION NUMBER: 1998252367 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 9591693
 TITLE: Separation of polystyrene microbeads using dielectrophoretic/gravitational field-flow-fractionation.
 AUTHOR: Wang X B; Vykoukal J; Becker F F; **Gascoyne P R**
 CORPORATE SOURCE: Department of Experimental Pathology, University of Texas M. D. Anderson Cancer Center, Houston 77030, USA..
 xiaobo@solace.mdacc.tmc.edu
 CONTRACT NUMBER: R01 DK51065-01 (NIDDK)
 SOURCE: Biophysical journal, (1998 May) 74 (5) 2689-701.
 Journal code: 0370626. ISSN: 0006-3495.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals; Space Life Sciences
 ENTRY MONTH: 199807
 ENTRY DATE: Entered STN: 19980723
 Last Updated on STN: 19980723
 Entered Medline: 19980716

AB The characterization of a dielectrophoretic/gravitational field-flow-fractionation (DEP/G-FFF) system using model polystyrene (PS) microbeads is presented. Separations of PS beads of different surface functionalization (COOH and none) and different sizes (6, 10, and 15 microm in diameter) are demonstrated. To investigate the factors influencing separation performance, **particle** elution times were determined as a function of **particle** suspension conductivity, fluid flow rate, and applied field frequency and voltage. Experimental data were analyzed using a previously reported theoretical model and good agreement between theory and experiment was found. It was shown that separation of PS beads was based on the differences in their effective dielectric properties. Particles possessing different dielectric properties were positioned at different heights in a fluid-flow profile in a thin chamber by the balance of DEP and gravitational forces, transported at different velocities under the influence of the fluid flow, and thereby

separated. To explore hydrodynamic (HD) lift effects, velocities of PS beads were determined as a function of fluid flow rate in the separation chamber when no DEP field was applied. In this case, **particle** equilibrium height positions were governed solely by the balance of HD lift and gravitational forces. It was concluded that under the experimental conditions reported here, the DEP force was the dominant factor in controlling **particle** equilibrium height and that HD lift force played little role in DEP/G-FFF operation. Finally, the influence of various experimental parameters on separation performance was discussed for the optimization of DEP/G-FFF.

L23 ANSWER 5 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
 ACCESSION NUMBER: 1997:142948 BIOSIS
 DOCUMENT NUMBER: PREV199799442151
 TITLE: On the low frequency dielectric properties of charged particles.
 AUTHOR(S): Wang, X.-B. Y. Huang; Becker, F. F.; Gascoyne, P. R. C.
 CORPORATE SOURCE: Box 89, UT M.D. Anderson Cancer Center, 1515 Holcombe Blvd., Houston, TX 77030, USA
 SOURCE: Biophysical Journal, (1997) Vol. 72, No. 2 PART 2, pp. A329.
 Meeting Info.: 41st Annual Meeting of the Biophysical Society. New Orleans, Louisiana, USA. March 2-6, 1997. CODEN: BIOJAU. ISSN: 0006-3495.
 DOCUMENT TYPE: Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 Conference; (Meeting Poster)
 LANGUAGE: English
 ENTRY DATE: Entered STN: 2 Apr 1997
 Last Updated on STN: 2 Apr 1997

=> FIL STNGUIDE		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	12.10	105.32
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-1.40

FILE 'STNGUIDE' ENTERED AT 18:04:27 ON 17 NOV 2004
 USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
 COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY, JAPAN SCIENCE
 AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.
 LAST RELOADED: Nov 12, 2004 (20041112/UP).

=> file medline biosis embase		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.12	105.44
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-1.40

FILE 'MEDLINE' ENTERED AT 18:05:26 ON 17 NOV 2004

FILE 'BIOSIS' ENTERED AT 18:05:26 ON 17 NOV 2004

Copyright (c) 2004 The Thomson Corporation.

FILE 'EMBASE' ENTERED AT 18:05:26 ON 17 NOV 2004
COPYRIGHT (C) 2004 Elsevier Inc. All rights reserved.

=> d his

(FILE 'HOME' ENTERED AT 17:29:33 ON 17 NOV 2004)

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, WPIDS' ENTERED AT 17:30:35 ON 17 NOV 2004

E GASCOYNE P/AU
L1 666167 S E3 OR E6 OR E7 OR E8 OR E10 OR E11 OR 39
L2 288 S E3 OR E6 OR E7 OR E8 OR E10 OR E11 OR E12
L3 4 S L2 AND MICROPARTICLE
L4 2 DUP REM L3 (2 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 17:35:12 ON 17 NOV 2004

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, WPIDS' ENTERED AT 17:44:00 ON 17 NOV 2004

L5 96 L2 AND DIELECTRIC?
L6 3 S L5 AND (SELF (W) ASSEMBLED (W) MONOLAYER)
L7 3 S L6 NOT L4
L8 3 DUP REM L6 (0 DUPLICATES REMOVED)
L9 32 L2 AND PARTICLE
L10 32 S L9 NOT L3

FILE 'STNGUIDE' ENTERED AT 17:50:06 ON 17 NOV 2004

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, WPIDS' ENTERED AT 17:53:33 ON 17 NOV 2004

L11 3 L2 AND GANGLIOSIDE
L12 2 S L11 AND VESICLE
L13 1 S L11 AND GHOST
L14 1 S L12 AND GHOST
L15 3 L11 NOT L 14
L16 3 L11 NOT 14
L17 2 L11 NOT L14

FILE 'MEDLINE, BIOSIS, EMBASE' ENTERED AT 17:56:58 ON 17 NOV 2004
E GASCOYNE P/AU

L18 129 S E3-E7
L19 15 L18 AND (PARTICLE OR MICROPARTICLE)
L20 0 S L18 AND GANGLIOSIDE
L21 9 L18 AND ERYTHROCYTE
L22 5 DUP REM L21 (4 DUPLICATES REMOVED)
L23 8 DUP REM L19 (7 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 18:04:27 ON 17 NOV 2004

FILE 'MEDLINE, BIOSIS, EMBASE' ENTERED AT 18:05:26 ON 17 NOV 2004

=> l18 and (self(w)assembled(w)monolayer)
L24 0 L18 AND (SELF(W) ASSEMBLED(W) MONOLAYER)

=> (self(w)assembled(w)monolayer)
L25 892 (SELF(W) ASSEMBLED(W) MONOLAYER)

=> s l18 and biotin?
L26 0 L18 AND BIOTIN?

=> s l18 and streptavidin
L27 0 L18 AND STREPTAVIDIN

=> l18 and dipolar
L28 0 L18 AND DIPOLAR

=> d. scan l18

L18 129 ANSWERS BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI Electrorotational studies of the cytoplasmic dielectric properties of
Friend murine erythroleukaemia cells.
IT Miscellaneous Descriptors
ERYTHROLEUKEMIA

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):end

=> l18 and (doping or dope or doped)
L29 0 L18 AND (DOPING OR DOPE OR DOPED)

=> l18 and core
L30 3 L18 AND CORE

=> dup rem l30
PROCESSING COMPLETED FOR L30
L31 1 DUP REM L30 (2 DUPLICATES REMOVED)

=> t ti l31

L31 ANSWER 1 OF 1 MEDLINE on STN DUPLICATE 1
TI Droplet-based chemistry on a programmable micro-chip.

=> d ibib abs l31

L31 ANSWER 1 OF 1 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2004117192 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15007434
TITLE: Droplet-based chemistry on a programmable micro-chip.
AUTHOR: Schwartz Jon A; Vykoukal Jody V; Gascoyne Peter R C
CORPORATE SOURCE: Department of Experimental Pathology, University of Texas M
D Anderson Cancer Center, Box 089, 1515 Holcombe Boulevard,
Houston, Texas, USA.. schwartz@mdanderson.org
SOURCE: Lab Chip, (2004 Feb) 4 (1) 11-7.
Journal code: 101128948. ISSN: 1473-0197.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200411
ENTRY DATE: Entered STN: 20040310
Last Updated on STN: 20041110
Entered Medline: 20041109

AB We describe the manipulation of aqueous droplets in an immiscible,
low-permittivity suspending medium. Such droplets may serve as carriers
for not only air- and water-borne samples, contaminants, chemical
reagents, viral and gene products, and cells, but also the reagents to
process and characterise these samples. We present proofs-of-concept for
droplet manipulation through dielectrophoresis by: (1). moving droplets on
a two-dimensional array of electrodes, (2). achieving dielectrically-
activated droplet injection, (3). fusing and reacting droplets, and (4).
conducting a basic biological assay through a combination of these steps.
A long-term goal of this research is to provide a platform fluidic

processor technology that can form the **core** of versatile, automated, micro-scale devices to perform chemical and biological assays at or near the point of care, which will increase the availability of modern medicine to people who do not have ready access to modern medical institutions, and decrease the cost and delays associated with that lack of access.

=> d his

(FILE 'HOME' ENTERED AT 17:29:33 ON 17 NOV 2004)

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, WPIDS' ENTERED AT 17:30:35 ON 17 NOV 2004

E GASCOYNE P/AU
L1 666167 S E3 OR E6 OR E7 OR E8 OR E10 OR E11 OR 39
L2 288 S E3 OR E6 OR E7 OR E8 OR E10 OR E11 OR E12
L3 4 S L2 AND MICROPARTICLE
L4 2 DUP REM L3 (2 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 17:35:12 ON 17 NOV 2004

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, WPIDS' ENTERED AT 17:44:00 ON 17 NOV 2004

L5 96 L2 AND DIELECTRIC?
L6 3 S L5 AND (SELF (W) ASSEMBLED (W) MONOLAYER)
L7 3 S L6 NOT L4
L8 3 DUP REM L6 (0 DUPLICATES REMOVED)
L9 32 L2 AND PARTICLE
L10 32 S L9 NOT L3

FILE 'STNGUIDE' ENTERED AT 17:50:06 ON 17 NOV 2004

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, WPIDS' ENTERED AT 17:53:33 ON 17 NOV 2004

L11 3 L2 AND GANGLIOSIDE
L12 2 S L11 AND VESICLE
L13 1 S L11 AND GHOST
L14 1 S L12 AND GHOST
L15 3 L11 NOT L 14
L16 3 L11 NOT 14
L17 2 L11 NOT L14

FILE 'MEDLINE, BIOSIS, EMBASE' ENTERED AT 17:56:58 ON 17 NOV 2004

E GASCOYNE P/AU
L18 129 S E3-E7
L19 15 L18 AND (PARTICLE OR MICROPARTICLE)
L20 0 S L18 AND GANGLIOSIDE
L21 9 L18 AND ERYTHROCYTE
L22 5 DUP REM L21 (4 DUPLICATES REMOVED)
L23 8 DUP REM L19 (7 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 18:04:27 ON 17 NOV 2004

FILE 'MEDLINE, BIOSIS, EMBASE' ENTERED AT 18:05:26 ON 17 NOV 2004

L24 0 L18 AND (SELF(W)ASSEMBLED(W)MONOLAYER)
L25 892 (SELF(W)ASSEMBLED(W)MONOLAYER)
L26 0 S L18 AND BIOTIN?
L27 0 S L18 AND STREPTAVIDIN
L28 0 L18 AND DIPOLAR
L29 0 L18 AND (DOPING OR DOPE OR DOPED)
L30 3 L18 AND CORE

L31 1 DUP REM L30 (2 DUPLICATES REMOVED)

=> 118 and fluorescen?

L32 7 L18 AND FLUORESCEN?

=> dup rem l32

PROCESSING COMPLETED FOR L32

L33 4 DUP REM L32 (3 DUPLICATES REMOVED)

=> t ti l33 1-4

L33 ANSWER 1 OF 4 MEDLINE on STN

TI Droplet-based chemistry on a programmable micro-chip.

L33 ANSWER 2 OF 4 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI Microsample preparation by dielectrophoresis: Isolation of malaria.

L33 ANSWER 3 OF 4 MEDLINE on STN

DUPLICATE 1

TI Electrorotation of liposomes: verification of dielectric multi-shell model for cells.

L33 ANSWER 4 OF 4 MEDLINE on STN

DUPLICATE 2

TI Changes in cell surface charge and transmembrane potential accompanying neoplastic transformation of rat kidney cells.

=> d his

(FILE 'HOME' ENTERED AT 17:29:33 ON 17 NOV 2004)

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, WPIDS' ENTERED AT 17:30:35 ON 17 NOV 2004

E GASCOYNE P/AU

L1 666167 S E3 OR E6 OR E7 OR E8 OR E10 OR E11 OR 39

L2 288 S E3 OR E6 OR E7 OR E8 OR E10 OR E11 OR E12

L3 4 S L2 AND MICROPARTICLE

L4 2 DUP REM L3 (2 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 17:35:12 ON 17 NOV 2004

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, WPIDS' ENTERED AT 17:44:00 ON 17 NOV 2004

L5 96 L2 AND DIELECTRIC?

L6 3 S L5 AND (SELF (W) ASSEMBLED (W) MONOLAYER)

L7 3 S L6 NOT L4

L8 3 DUP REM L6 (0 DUPLICATES REMOVED)

L9 32 L2 AND PARTICLE

L10 32 S L9 NOT L3

FILE 'STNGUIDE' ENTERED AT 17:50:06 ON 17 NOV 2004

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, WPIDS' ENTERED AT 17:53:33 ON 17 NOV 2004

L11 3 L2 AND GANGLIOSIDE

L12 2 S L11 AND VESICLE

L13 1 S L11 AND GHOST

L14 1 S L12 AND GHOST

L15 3 L11 NOT L 14

L16 3 L11 NOT 14

L17 2 L11 NOT L14

FILE 'MEDLINE, BIOSIS, EMBASE' ENTERED AT 17:56:58 ON 17 NOV 2004

E GASCOYNE P/AU
 L18 129 S E3-E7
 L19 15 L18 AND (PARTICLE OR MICROPARTICLE)
 L20 0 S L18 AND GANGLIOSIDE
 L21 9 L18 AND ERYTHROCYTE
 L22 5 DUP REM L21 (4 DUPLICATES REMOVED)
 L23 8 DUP REM L19 (7 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 18:04:27 ON 17 NOV 2004

FILE 'MEDLINE, BIOSIS, EMBASE' ENTERED AT 18:05:26 ON 17 NOV 2004
 L24 0 L18 AND (SELF(W)ASSEMBLED(W)MONOLAYER)
 L25 892 (SELF(W)ASSEMBLED(W)MONOLAYER)
 L26 0 S L18 AND BIOTIN?
 L27 0 S L18 AND STREPTAVIDIN
 L28 0 L18 AND DIPOLAR
 L29 0 L18 AND (DOPING OR DOPE OR DOPED)
 L30 3 L18 AND CORE
 L31 1 DUP REM L30 (2 DUPLICATES REMOVED)
 L32 7 L18 AND FLUORESCEN?
 L33 4 DUP REM L32 (3 DUPLICATES REMOVED)

=> logoff y

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
11.25	116.69

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-1.40

CA SUBSCRIBER PRICE

STN INTERNATIONAL LOGOFF AT 18:13:37 ON 17 NOV 2004

WEST Search History

[Hide Items](#)[Restore](#)[Clear](#)[Cancel](#)

DATE: Wednesday, November 17, 2004

Hide?	<u>Set</u> <u>Name</u>	<u>Query</u>	<u>Hit</u> <u>Count</u>
		<i>DB=PGPB,USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L5	(microbead or bead or particle or microparticle) same (dielectrophore\$ with (move or moving or rotate or rotating or maneuvering or maneuverable or sort or sorting or sorted))	144
<input type="checkbox"/>	L4	(microbead or bead or particle or microparticle) same dielectrophore\$	440
<input type="checkbox"/>	L3	(microbead or bead or particle or microparticle) and dielectrophore\$	673
<input type="checkbox"/>	L2	(microbead or bead or particle or microparticle) and dielectrophoresis	478
<input type="checkbox"/>	L1	(microbead or bead or particle or microparticle) and dielectrophore?	0

END OF SEARCH HISTORY

Hit List

Clear

Generate Collection

Print

Fwd Refs

Bkwd Refs

Generate OACS

Search Results - Record(s) 51 through 100 of 144 returned.☐ 51. Document ID: US 20020115163 A1**Using default format because multiple data bases are involved.**

L5: Entry 51 of 144

File: PGPB

Aug 22, 2002

PGPUB-DOCUMENT-NUMBER: 20020115163

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020115163 A1

TITLE: Methods for sorting particles by size and elasticity

PUBLICATION-DATE: August 22, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Wang, Mark M.	San Diego	CA	US	
Tu, Eugene	San Diego	CA	US	
O'Connell, James P.	Del Mar	CA	US	
Lykstad, Kristie L.	San Diego	CA	US	
Butler, William F.	La Jolla	CA	US	

US-CL-CURRENT: 435/173.9

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw D
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	-----	--------

☐ 52. Document ID: US 20020113204 A1

L5: Entry 52 of 144

File: PGPB

Aug 22, 2002

PGPUB-DOCUMENT-NUMBER: 20020113204

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020113204 A1

TITLE: Apparatus for collection of sorted particles

PUBLICATION-DATE: August 22, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Wang, Mark M.	San Diego	CA	US	
Tu, Eugene	San Diego	CA	US	
O'Connell, James P.	Del Mar	CA	US	

Lykstad, Kristie L. San Diego CA US
Butler, William F. La Jolla CA US

US-CL-CURRENT: 250/251

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	----------

☐ 53. Document ID: US 20020108859 A1

L5: Entry 53 of 144

File: PGPB

Aug 15, 2002

PGPUB-DOCUMENT-NUMBER: 20020108859

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020108859 A1

TITLE: Methods for modifying interaction between dielectric particles and surfaces

PUBLICATION-DATE: August 15, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Wang, Mark M.	San Diego	CA	US	
Tu, Eugene	San Diego	CA	US	
O'Connell, James P.	Del Mar	CA	US	
Lykstad, Kristie L.	San Diego	CA	US	
Butler, William F.	La Jolla	CA	US	

US-CL-CURRENT: 204/547; 204/451, 204/601, 204/643

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	----------

☐ 54. Document ID: US 20020106314 A1

L5: Entry 54 of 144

File: PGPB

Aug 8, 2002

PGPUB-DOCUMENT-NUMBER: 20020106314

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020106314 A1

TITLE: Microlaboratory devices and methods

PUBLICATION-DATE: August 8, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Pelrine, Ronald E.	Boulder	CO	US	
Shastri, Subramanian Venkat	Palo Alto	CA	US	
Joseph, Jose P.	Palo Alto	CA	US	

US-CL-CURRENT: 422/186; 204/164

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	--------

☐ 55. Document ID: US 20020088712 A1

L5: Entry 55 of 144

File: PGPB

Jul 11, 2002

PGPUB-DOCUMENT-NUMBER: 20020088712

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020088712 A1

TITLE: Movement of particles using sequentially activated dielectrophoretic
particle trapping

PUBLICATION-DATE: July 11, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Miles, Robin R.	Danville	CA	US	

US-CL-CURRENT: 204/547; 204/643

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	--------

☐ 56. Document ID: US 20020076825 A1

L5: Entry 56 of 144

File: PGPB

Jun 20, 2002

PGPUB-DOCUMENT-NUMBER: 20020076825

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020076825 A1

TITLE: Integrated biochip system for sample preparation and analysis

PUBLICATION-DATE: June 20, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Cheng, Jing	Beijing	CA	CN	
Wang, Xiaobo	San Diego	CA	US	
Wu, Lei	San Diego	CA	US	
Yang, Weiping	San Diego		US	
Xu, Junquan	Beijing		CN	

US-CL-CURRENT: 436/174

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	--------

☐ 57. Document ID: US 20020058332 A1

L5: Entry 57 of 144

File: PGPB

May 16, 2002

PGPUB-DOCUMENT-NUMBER: 20020058332

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020058332 A1

TITLE: Microfabricated crossflow devices and methods

PUBLICATION-DATE: May 16, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Quake, Stephen R.	Pasadena	CA	US	
Thorsen, Todd	Pasadena	CA	US	

US-CL-CURRENT: 435/288.3; 204/451, 204/601, 422/101, 422/70

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	----------

☐ 58. Document ID: US 20020037499 A1

L5: Entry 58 of 144

File: PGPB

Mar 28, 2002

PGPUB-DOCUMENT-NUMBER: 20020037499

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020037499 A1

TITLE: Integrated active flux microfluidic devices and methods

PUBLICATION-DATE: March 28, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Quake, Stephen R.	San Marino	CA	US	
Chou, Hou-Pu	Foster City	CA	US	

US-CL-CURRENT: 435/5; 422/57, 422/99, 435/305.2, 435/6, 436/536

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	----------

☐ 59. Document ID: US 20020036142 A1

L5: Entry 59 of 144

File: PGPB

Mar 28, 2002

PGPUB-DOCUMENT-NUMBER: 20020036142

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020036142 A1

TITLE: Systems and methods for cell subpopulation analysis

PUBLICATION-DATE: March 28, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Gascoyne, Peter	Bellaire	TX	US	
Vykoukal, Jody V.	Houston	TX	US	
Becker, Frederick F.	Houston	TX	US	

US-CL-CURRENT: 204/547; 204/643

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	-----	----------

☐ 60. Document ID: US 20020034827 A1

L5: Entry 60 of 144

File: PGPB

Mar 21, 2002

PGPUB-DOCUMENT-NUMBER: 20020034827

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020034827 A1

TITLE: Methods for solid phase nanoextraction and desorption

PUBLICATION-DATE: March 21, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Singh, Rajendra	San Jose	CA	US	
Cromer, Remy	San Jose	CA	US	
Natan, Michael J.	Los Altos	CA	US	

US-CL-CURRENT: 436/177; 436/524

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	-----	----------

☐ 61. Document ID: US 20020034748 A1

L5: Entry 61 of 144

File: PGPB

Mar 21, 2002

PGPUB-DOCUMENT-NUMBER: 20020034748

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020034748 A1

TITLE: Methods and systems for molecular fingerprinting

PUBLICATION-DATE: March 21, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Quake, Stephen R.	San Marino	CA	US	
Chou, Hou-Pu	Foster City	CA	US	

US-CL-CURRENT: 435/6; 435/91.2, 702/20

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	-----	----------

☐ 62. Document ID: US 20020022261 A1

L5: Entry 62 of 144

File: PGPB

Feb 21, 2002

PGPUB-DOCUMENT-NUMBER: 20020022261

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020022261 A1

TITLE: Miniaturized genetic analysis systems and methods

PUBLICATION-DATE: February 21, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Anderson, Rolfe C.	Saratoga	CA	US	
Lipshutz, Robert J.	Palo Alto	CA	US	
Rava, Richard P.	Redwood City	CA	US	
Fodor, Stephen P. A.	Palo Alto	CA	US	

US-CL-CURRENT: 435/287.2; 435/287.9, 435/288.6, 435/6

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	-----	----------

☐ 63. Document ID: US 20020005294 A1

L5: Entry 63 of 144

File: PGPB

Jan 17, 2002

PGPUB-DOCUMENT-NUMBER: 20020005294

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020005294 A1

TITLE: Electro-fluidic assembly process for integration of electronic devices onto a substrate

PUBLICATION-DATE: January 17, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Mayer, Theresa S.	Port Matilda	PA	US	
Jackson, Thomas N.	State College	PA	US	
Nordquist, Christopher D.	State College	PA	US	

US-CL-CURRENT: 174/260; 174/261, 257/E21.705, 29/831, 29/832

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	-----	----------

☐ 64. Document ID: US 20010047941 A1

L5: Entry 64 of 144

File: PGPB

Dec 6, 2001

PGPUB-DOCUMENT-NUMBER: 20010047941

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010047941 A1

TITLE: Electrode for dielectrophoretic apparatus, dielectrophoretic apparatus,
method for manufacturing the same, and method for separating substances using the
electrode or dielectrophoretic apparatus

PUBLICATION-DATE: December 6, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Washizu, Masao	Sakyo-Ku		JP	
Kawabata, Tomohisa	Amagasaki-Shi		JP	

US-CL-CURRENT: 204/547

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. D
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	---------

☐ 65. Document ID: US 20010023825 A1

L5: Entry 65 of 144

File: PGPB

Sep 27, 2001

PGPUB-DOCUMENT-NUMBER: 20010023825

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010023825 A1

TITLE: Methods and apparatus for nonlinear mobility electrophoresis separation

PUBLICATION-DATE: September 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Frumin, Leonid	Rehovot		IL	
Pelteck, Sergey E.	Rehovot		IL	
Zilberstein, Gleb V.	Rehovot		IL	
Bukshpan, Shmuel	Dortmund		DE	
Halavee, Uriel	Ramat-Gan		IL	

US-CL-CURRENT: 204/458, 204/450, 204/451, 204/455, 204/459, 204/466, 204/469,
204/470, 204/547, 204/600, 204/601, 204/605, 204/609, 204/610, 204/616, 204/619,
204/643, 204/644

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. D
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	---------

☐ 66. Document ID: US 6815664 B2

L5: Entry 66 of 144

File: USPT

Nov 9, 2004

US-PAT-NO: 6815664

DOCUMENT-IDENTIFIER: US 6815664 B2

TITLE: Method for separation of particles

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	------	----------

☐ 67. Document ID: US 6800490 B1

L5: Entry 67 of 144

File: USPT

Oct 5, 2004

US-PAT-NO: 6800490

DOCUMENT-IDENTIFIER: US 6800490 B1

TITLE: Methods for solid phase nanoextraction and desorption

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	------	----------

☐ 68. Document ID: US 6790330 B2

L5: Entry 68 of 144

File: USPT

Sep 14, 2004

US-PAT-NO: 6790330

DOCUMENT-IDENTIFIER: US 6790330 B2

TITLE: Systems and methods for cell subpopulation analysis

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	------	----------

☐ 69. Document ID: US 6787018 B1

L5: Entry 69 of 144

File: USPT

Sep 7, 2004

US-PAT-NO: 6787018

DOCUMENT-IDENTIFIER: US 6787018 B1

TITLE: Dielectrophoretic concentration of particles under electrokinetic flow

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	------	----------

☐ 70. Document ID: US 6784420 B2

L5: Entry 70 of 144

File: USPT

Aug 31, 2004

US-PAT-NO: 6784420

DOCUMENT-IDENTIFIER: US 6784420 B2

TITLE: Method of separating particles using an optical gradient

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWMC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	----------	--------	------	----------

☐ 71. Document ID: US 6767706 B2

L5: Entry 71 of 144

File: USPT

Jul 27, 2004

US-PAT-NO: 6767706

DOCUMENT-IDENTIFIER: US 6767706 B2

TITLE: Integrated active flux microfluidic devices and methods

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWMC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	----------	--------	------	----------

☐ 72. Document ID: US 6764583 B2

L5: Entry 72 of 144

File: USPT

Jul 20, 2004

US-PAT-NO: 6764583

DOCUMENT-IDENTIFIER: US 6764583 B2

TITLE: Using impedance measurements for detecting pathogens trapped in an electric field

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWMC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	----------	--------	------	----------

☐ 73. Document ID: US 6749736 B1

L5: Entry 73 of 144

File: USPT

Jun 15, 2004

US-PAT-NO: 6749736

DOCUMENT-IDENTIFIER: US 6749736 B1

TITLE: Electrode arrangement for the dielectrophoretic diversion of particles

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWMC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	----------	--------	------	----------

☐ 74. Document ID: US 6749669 B1

L5: Entry 74 of 144

File: USPT

Jun 15, 2004

US-PAT-NO: 6749669

DOCUMENT-IDENTIFIER: US 6749669 B1

TITLE: Air cleaning device

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWMC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	----------	--------	------	----------

☐ 75. Document ID: US 6744038 B2

L5: Entry 75 of 144

File: USPT

Jun 1, 2004

US-PAT-NO: 6744038

DOCUMENT-IDENTIFIER: US 6744038 B2

TITLE: Methods of separating particles using an optical gradient

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWIC	Drawings
------	-------	----------	-------	--------	----------------	------	-----------	----------	--------	------	----------

☐ 76. Document ID: US 6730204 B2

L5: Entry 76 of 144

File: USPT

May 4, 2004

US-PAT-NO: 6730204

DOCUMENT-IDENTIFIER: US 6730204 B2

TITLE: Three dimensional separation trap based on dielectrophoresis and use thereof

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWIC	Drawings
------	-------	----------	-------	--------	----------------	------	-----------	----------	--------	------	----------

☐ 77. Document ID: US 6706163 B2

L5: Entry 77 of 144

File: USPT

Mar 16, 2004

US-PAT-NO: 6706163

DOCUMENT-IDENTIFIER: US 6706163 B2

**** See image for Certificate of Correction ****

TITLE: On-chip analysis of particles and fractionation of particle mixtures using light-controlled electrokinetic assembly of particles near surfaces

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWIC	Drawings
------	-------	----------	-------	--------	----------------	------	-----------	----------	--------	------	----------

☐ 78. Document ID: US 6687987 B2

L5: Entry 78 of 144

File: USPT

Feb 10, 2004

US-PAT-NO: 6687987

DOCUMENT-IDENTIFIER: US 6687987 B2

TITLE: Electro-fluidic assembly process for integration of electronic devices onto a substrate

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWIC	Drawings
------	-------	----------	-------	--------	----------------	------	-----------	----------	--------	------	----------

☐ 79. Document ID: US 6685812 B2

L5: Entry 79 of 144

File: USPT

Feb 3, 2004

US-PAT-NO: 6685812

DOCUMENT-IDENTIFIER: US 6685812 B2

TITLE: Movement of particles using sequentially activated dielectrophoretic particle trapping

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw D
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	------	--------

☐ 80. Document ID: US 6641708 B1

L5: Entry 80 of 144

File: USPT

Nov 4, 2003

US-PAT-NO: 6641708

DOCUMENT-IDENTIFIER: US 6641708 B1

TITLE: Method and apparatus for fractionation using conventional dielectrophoresis and field flow fractionation

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw D
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	------	--------

☐ 81. Document ID: US 6630835 B2

L5: Entry 81 of 144

File: USPT

Oct 7, 2003

US-PAT-NO: 6630835

DOCUMENT-IDENTIFIER: US 6630835 B2

TITLE: Apparatus and method for high throughput electrorotation analysis

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw D
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	------	--------

☐ 82. Document ID: US 6626724 B2

L5: Entry 82 of 144

File: USPT

Sep 30, 2003

US-PAT-NO: 6626724

DOCUMENT-IDENTIFIER: US 6626724 B2

TITLE: Method of manufacturing electron emitter and associated display

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw D
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	------	--------

☐ 83. Document ID: US 6596143 B1

L5: Entry 83 of 144

File: USPT

Jul 22, 2003

US-PAT-NO: 6596143

DOCUMENT-IDENTIFIER: US 6596143 B1

TITLE: Apparatus for switching and manipulating particles and method of use thereof

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	------	----------

☐ 84. Document ID: US 6576459 B2

L5: Entry 84 of 144

File: USPT

Jun 10, 2003

US-PAT-NO: 6576459

DOCUMENT-IDENTIFIER: US 6576459 B2

TITLE: Sample preparation and detection device for infectious agents

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	------	----------

☐ 85. Document ID: US 6563260 B1

L5: Entry 85 of 144

File: USPT

May 13, 2003

US-PAT-NO: 6563260

DOCUMENT-IDENTIFIER: US 6563260 B1

TITLE: Electron emission element having resistance layer of particular particles

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	------	----------

☐ 86. Document ID: US 6540895 B1

L5: Entry 86 of 144

File: USPT

Apr 1, 2003

US-PAT-NO: 6540895

DOCUMENT-IDENTIFIER: US 6540895 B1

TITLE: Microfabricated cell sorter for chemical and biological materials

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	------	----------

☐ 87. Document ID: US 6496997 B1

L5: Entry 87 of 144

File: USPT

Dec 24, 2002

US-PAT-NO: 6496997

DOCUMENT-IDENTIFIER: US 6496997 B1

**** See image for Certificate of Correction ****

TITLE: Hard disk driver with an integrated structure for electrostatically removing

dielectric particles generated during the operation, and electrostatic cleaning method for a hard disk driver

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	------	----------

☐ 88. Document ID: US 6465225 B1

L5: Entry 88 of 144

File: USPT

Oct 15, 2002

US-PAT-NO: 6465225

DOCUMENT-IDENTIFIER: US 6465225 B1

TITLE: Method and device for manipulating particles in microsystems

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	------	----------

☐ 89. Document ID: US 6448794 B1

L5: Entry 89 of 144

File: USPT

Sep 10, 2002

US-PAT-NO: 6448794

DOCUMENT-IDENTIFIER: US 6448794 B1

TITLE: Apparatus and method for high throughput electrorotation analysis

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	------	----------

☐ 90. Document ID: US 6387707 B1

L5: Entry 90 of 144

File: USPT

May 14, 2002

US-PAT-NO: 6387707

DOCUMENT-IDENTIFIER: US 6387707 B1

TITLE: Array Cytometry

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	------	----------

☐ 91. Document ID: US 6352838 B1

L5: Entry 91 of 144

File: USPT

Mar 5, 2002

US-PAT-NO: 6352838

DOCUMENT-IDENTIFIER: US 6352838 B1

TITLE: Microfluidic DNA sample preparation method and device

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	------	----------

☐ 92. Document ID: US 6310309 B1

L5: Entry 92 of 144

File: USPT

Oct 30, 2001

US-PAT-NO: 6310309

DOCUMENT-IDENTIFIER: US 6310309 B1

TITLE: Methods of analysis/separation

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	----------	--------	------	----------

☐ 93. Document ID: US 6294063 B1

L5: Entry 93 of 144

File: USPT

Sep 25, 2001

US-PAT-NO: 6294063

DOCUMENT-IDENTIFIER: US 6294063 B1

TITLE: Method and apparatus for programmable fluidic processing

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	----------	--------	------	----------

☐ 94. Document ID: US 6264815 B1

L5: Entry 94 of 144

File: USPT

Jul 24, 2001

US-PAT-NO: 6264815

DOCUMENT-IDENTIFIER: US 6264815 B1

**** See image for Certificate of Correction ****

TITLE: Apparatus and method for testing using dielectrophoresis

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	----------	--------	------	----------

☐ 95. Document ID: US 6197176 B1

L5: Entry 95 of 144

File: USPT

Mar 6, 2001

US-PAT-NO: 6197176

DOCUMENT-IDENTIFIER: US 6197176 B1

TITLE: Manipulation of solid, semi-solid or liquid materials

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	----------	--------	------	----------

☐ 96. Document ID: US 6185084 B1

L5: Entry 96 of 144

File: USPT

Feb 6, 2001

US-PAT-NO: 6185084

DOCUMENT-IDENTIFIER: US 6185084 B1

TITLE: Electrostatic particle transportation

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--------	------	----------

☐ 97. Document ID: US 6168948 B1

L5: Entry 97 of 144

File: USPT

Jan 2, 2001

US-PAT-NO: 6168948

DOCUMENT-IDENTIFIER: US 6168948 B1

TITLE: Miniaturized genetic analysis systems and methods

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--------	------	----------

☐ 98. Document ID: US 6149789 A

L5: Entry 98 of 144

File: USPT

Nov 21, 2000

US-PAT-NO: 6149789

DOCUMENT-IDENTIFIER: US 6149789 A

TITLE: Process for manipulating microscopic, dielectric particles and a device therefor

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--------	------	----------

☐ 99. Document ID: US 6059950 A

L5: Entry 99 of 144

File: USPT

May 9, 2000

US-PAT-NO: 6059950

DOCUMENT-IDENTIFIER: US 6059950 A

TITLE: Travelling wave particle separation apparatus

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--------	------	----------

☐ 100. Document ID: US 6056861 A

L5: Entry 100 of 144

File: USPT

May 2, 2000

US-PAT-NO: 6056861

DOCUMENT-IDENTIFIER: US 6056861 A

TITLE: Process and device for generating resonance phenomena in particle suspensions

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Drawn D
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	------	---------

Clear	Generate Collection	Print	Fwd Refs	Bkwd Refs	Generate OACS
-------	---------------------	-------	----------	-----------	---------------

Terms	Documents
(microbead or bead or particle or microparticle) same (dielectrophore\$ with (move or moving or rotate or rotating or manuevering or manueverable or sort or sorting or sorted))	144

Display Format:

[Previous Page](#) [Next Page](#) [Go to Doc#](#)

31. (Original) The method of claim 24, wherein the linking element comprises an antibody, single chain antibody, peptide, hormone, nucleic acid sequence, therapeutic drug, antibiotic, or a chemically-reactive compound.
32. (Original) The method of claim 24, wherein the insulating layer comprises one or more self-assembled monolayer layers.
33. (Original) A method for identifying one or more complexes within a sample, the method comprising:
- admixing with the sample a plurality of engineered microparticles, each microparticle having a different dielectric property;
 - associating the plurality of engineered microparticles with one or more target analytes to form one or more complexes; and
 - identifying the one or more complexes by distinguishing between the different dielectric properties.
34. (Original) The method of claim 33, wherein each the plurality of engineered microparticles comprise a conductive core and an insulating layer.
35. (Original) The method of claim 34, wherein the insulating layer comprises one or more self-assembled monolayer layers.